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July 17, 1998

VIA HAND DELIVERY

Ms. Magalie Salas
Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Re: *Second Application by BellSouth Corporation, BellSouth Telecommunications, Inc., and BellSouth Long Distance, Inc., for Provision of In-Region, InterLATA Services in Louisiana*, CC Docket 98-121

Dear Ms. Salas:

Enclosed for filing please find an original and one copy of 22 pages that were inadvertently omitted from Appendix B, Vol. 4, Tab 30 of BellSouth's application in the above-captioned matter. This Tab contains the BellSouth/AT&T interconnection agreement. Fourteen copies of this material will also be provided to the Common Carrier Bureau.

No new material is being added to the application. The pages being submitted today are duplicates of pages that can be found in Appendix C-2, Vol. 24, Tab 200 of BellSouth's application. These pages were filed with the Commission both in paper form and on CD-ROM.

Please date stamp the extra copy of these materials and return it to the individual delivering this package. Thank you for your assistance in this matter.

Sincerely,

Austin C. Schlick

Austin C. Schlick

Enclosures

No. of Copies rec'd 0+1
List ABCDE

7.2.1.18.6 When the following triggers are supported by BellSouth, BellSouth will make these triggers available to AT&T:

7.2.1.18.6.1 Private EAMF Trunk

7.2.1.18.6.2 Shared Interoffice Trunk (EAMF, SS7)

7.2.1.18.6.3 N11

7.2.1.18.6.4 Automatic Route Selection

7.2.1.19 BellSouth shall assign each AT&T customer line the class of service designated by AT&T (e.g., using line class codes or other switch specific provisioning methods), and shall route, pursuant to Section 19 to the General Terms and Conditions of the Agreement, directory assistance calls from AT&T customers to AT&T directory assistance operators at AT&T's option.

7.2.1.20 BellSouth shall assign each AT&T customer line the class of services designated by AT&T (e.g., using line class codes or other switch specific provisioning methods) and shall route, pursuant to Section 19 to the General Terms and Conditions of the Agreement, operator calls from AT&T customers to AT&T operators at AT&T's option. For example, BellSouth may translate 0- and 0+ intraLATA traffic, and route the call through appropriate trunks to an AT&T Operator Services Position System (OSPS). Calls from Local Switching must pass the ANI-II digits unchanged.

7.2.1.21 If AT&T requests disconnection of the Local Switching element, BellSouth shall disconnect promptly and remove all appropriate translations from BellSouth facilities.

7.2.1.22 If an AT&T customer subscribes to AT&T provided voice mail and messaging services, BellSouth shall redirect incoming calls to the AT&T system based upon presubscribed service arrangements (e.g., busy, don't answer, number of rings). In addition, BellSouth shall provide a Standard Message Desk Interface-Enhanced (SMDI-E) interface to the AT&T system. BellSouth shall support the Inter-switch Voice Messaging Service (IVMS) capability.

7.2.1.23 Local Switching shall be offered in accordance with the requirements of the following technical references:

7.2.1.23.1 GR-1298-CORE, AIN Switching System Generic Requirements, as implemented in BellSouth's switching equipment;

7.2.1.23.2 GR-1299-CORE, AIN Switch-Service Control Point (SCP)/Adjunct Interface Generic Requirements;

7.2.1.23.3 TR-NWT-001284, AIN 0.1 Switching System Generic Requirements;

7.2.1.23.4 SR-NWT-002247, AIN Release 1 Update.

7.2.2 **Interface Requirements**

7.2.2.1 BellSouth shall provide the following interfaces to loops:

7.2.2.2 Standard Tip/Ring interface including loopstart or groundstart, on-hook signaling (*e.g.*, for calling number, calling name and message waiting lamp);

7.2.2.3 Coin phone signaling;

7.2.2.4 Basic Rate Interface ISDN adhering to appropriate Bellcore Technical Requirements;

7.2.2.5 Two-wire analog interface to PBX;

7.2.2.5.1 Four-wire analog interface to PBX;

7.2.2.6 Four-wire DS1 interface to PBX or customer provided equipment (e.g. computers and voice response systems);

7.2.2.7 Primary Rate ISDN to PBX adhering to ANSI standards Q.931, Q.932 and appropriate Bellcore Technical Requirements;

7.2.2.8 Switched Fractional DS1 with capabilities to configure Nx64 channels (where N = 1 to 24); and

7.2.2.9 Loops adhering to Bellcore TR-NWT-08 and TR-NWT-303 specifications to interconnect Digital Loop Carriers.

7.2.2.10 BellSouth shall provide access to the following but not limited to:

7.2.2.11 SS7 Signaling Network or Multi-Frequency trunking if requested by AT&T;

7.2.2.12 Interface to AT&T operator services systems or Operator Services through appropriate trunk interconnections for the system; and

7.2.2.13 Interface to AT&T directory assistance services through the AT&T switched network or to Directory Assistance Services through the appropriate trunk interconnections for the system; and 950 access or

other AT&T required access to interexchange carriers as requested through appropriate trunk interfaces.

7.3 **Data Switching**

The requirements set forth in this Section 7.3 apply only to the Data Switching function of Local Switching.

7.3.1 **Data Switching Technical Requirements**

7.3.1.1 Data Switching includes the necessary cross-office connectivity to the DSX or other appropriate connection point where interconnection to transport, or a cross-connect device can occur. Wherever Data Switching interconnects across network boundaries, it shall be in accordance with Network-to-Network Interface standards.

7.3.1.2 **Frame Relay Functional Requirements**

7.3.1.3 Frame Relay Data Switching shall provide Permanent Virtual Circuits (PVCs) in accordance with the core protocol in ANSI Standard T1.618 ("Core aspects of Frame Protocol for use with Frame Relay Bearer Service," ANSI Standard T1.618, October 1991).

7.3.1.4 Control procedures for PVC management that shall be provided by Data Switching over the UNI include at least the Local Management interface (LMI) (as described in "Frame Relay Specification with Extensions," Rev 1.0, Digital Equipment Corporation, Northern Telecom, Inc., and StrataCom, Inc., September 18, 1990), ANSI Standard T1.617: Annex D ("Signaling Specification for Frame Relay Bearer Service," ANSI Standard T1.617, October 1991), and ITU-T Recommendation Q.933: Annex A ("Digital subscriber Signaling System No. 1 – Signaling specification for frame mode bearer service," ITU-T Recommendation Q.933, March 1993) specifications.

7.3.1.5 Data Switching provided to AT&T shall be given equal priority to BellSouth's own traffic during overflow and congestion conditions. To control the flow of data through the network and to prevent congestion of shared resources, Data Switching shall perform traffic management and policing functions on the ingress of data (flowing from customer into the network) and the egress of data (flowing from the network out to the customer). Traffic management is the mechanism used by Data Switching to prevent and reduce congestion within the network, such as buffering data and discarding data when buffers overflow, and may be performed on ingress or egress. Traffic policing is the enforcement by Data Switching of the contracted rate for the ingress of data, described in terms of several parameters such as Peak Rate, Committed Rate, and Burst Size. Traffic management and policing performed at ingress and

egress on AT&T's traffic shall be at parity with that performed on BellSouth's traffic.

7.3.1.6 As systems development allows, Data Switching shall provide remote data access to integrated test equipment and other integrated functionality on a demand basis in accordance with the following:

7.3.1.7 Real-time, remote data access to systems that enable the determination of Data Link Connection Identifiers (DLCIs) used by a PVC;

7.3.1.8 Real-time, remote data access to performance monitoring and alarm data on events affecting (or potentially affecting) AT&T's traffic; and

7.3.1.9 Real-time, remote data access to maintenance systems to enable end-to-end (customer site-to-customer site) performance and error testing.

7.3.1.10 BellSouth shall provision and maintain the underlying facilities required to provide Data Switching.

7.3.1.11 **Frame Relay Interface Requirements**

7.3.1.12 From Customer Premises Equipment (CPE), AT&T's Customers may interconnect to Data Switching using the transmission speeds, formats, and protocols as specified in the Frame Relay Forum Implementation Agreement 1 (FRF-1.1) ("User-to-Network Implementation Agreement (UNI)," FRF-1.1, Frame Relay Forum Technical Committee, January 18, 1996) and the standards cited in that document for the physical layer, data transfer, and control procedures. This includes, but is not limited to, access circuits at fractional T1 rates (56Kbps, Nx64 Kbps, (where N is 1 to 24)), T1, and T3.

7.3.1.13 Each T1 UNI interface port shall provide at least 250 PVCs or the appropriate number of PVC's allowed by the platform.

7.3.1.14 T1 interfaces shall be provided using Extended SuperFrame (ESF) format, for enhanced error monitoring and to aid in sectionalizing problems.

7.3.1.15 **NNI Interface B Requirements**

7.3.1.16 Data Switching shall interconnect across network boundaries using the Network-to-Network Interface standards as specified in Frame Relay Forum Implementation Agreement 2 (FRF-2.1) ("Network -to-Network Implementation Agreement (NNI)," FRF-2.1, Frame Relay Forum Technical Committee, July 10, 1995) for the physical layer, data transfer,

and control (signaling) procedures. This standard includes both DS1 and DS3 among its listed physical interface formats.

7.3.1.17 Each T1 NNI should be capable of providing at least 200 PVCs; each T3 NNI should be capable of providing at least 1700 PVCs or the appropriate number of PVC's allowed by the platform.

7.3.1.18 **DELETED**

7.3.1.19 **DELETED**

7.3.1.20 ATM Functional Requirements: When ATM functionality becomes available, BellSouth will provide these functions to AT&T. In addition BellSouth agrees to conform to industry standard (e.g. Bellcore standards).

7.3.1.20.1 **DELETED**

7.3.1.20.2 **DELETED**

7.3.1.20.3 **DELETED**

7.3.1.20.3.1 **DELETED**

7.3.1.20.3.2 **DELETED**

7.3.1.20.3.3 **DELETED**

7.3.1.20.4 **DELETED**

7.3.1.20.5 **DELETED**

7.3.1.21 **DELETED**

7.3.1.21.1 **DELETED**

7.3.1.21.1.1 **DELETED**

7.3.1.21.1.2 **DELETED**

7.3.1.21.2 **DELETED**

7.3.1.21.3 **DELETED**

7.3.1.21.4 **DELETED**

7.3.1.21.4.1 **DELETED**

7.3.1.21.4.2 **DELETED**

7.3.1.21.4.3 **DELETED**

7.3.1.21.4.4 **DELETED**

7.3.1.21.4.5 **DELETED**

7.3.1.21.4.6 **DELETED**

7.3.1.21.5 **DELETED**

7.3.1.21.6 **DELETED**

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7.3.1.21.6.4 **DELETED**

7.3.1.21.6.5 **DELETED**

7.3.1.21.6.6 **DELETED**

7.3.1.21.6.7 **DELETED**

7.3.1.21.6.7.1 **DELETED**

7.3.1.21.6.7.2 **DELETED**

7.3.1.21.6.7.3 **DELETED**

7.3.1.21.6.8 **DELETED**

7.3.1.22 **Integrated Services Digital Network (ISDN)**

Integrated Services Digital Network (ISDN) is defined in two variations. The first variation is Basic Rate ISDN (BRI). BRI consists of 2 Bearer (B) Channels and one Data (D) Channel. The second variation is Primary Rate ISDN (PRI). PRI consists of 23 B Channels and one D Channel. Both BRI and PRI B Channels may be used for voice, Circuit Switched Data (CSD) or Packet Switched Data (PSD). The BRI D Channel may be used for call related signaling, non-call related signaling or packet switched data. The PRI D Channel may be used for call related signaling.

7.3.1.22.1 Technical Requirements - ISDN

7.3.1.22.2 BellSouth shall offer Data Switching providing ISDN that, at a minimum:

7.3.1.22.3 Provides integrated packet handling capabilities;

7.3.1.22.4 Allows for full 2B+D Channel functionality for BRI; and

7.3.1.22.5 Allows for full 23B+D Channel functionality for PRI.

7.3.1.22.6 Each B Channel shall allow for voice, 64Kbs CSD, and PSD of 128 logical channels at minimum speeds of 19Kbs throughput of each logical channel up to the total capacity of the B Channel.

7.3.1.22.7 Each B Channel shall provide capabilities for alternate voice and data on a per call basis.

7.3.1.22.8 The BRI D Channel shall allow for call associated signaling, non-call associated signaling and PSD of 16 logical channels at minimum speeds of 9.6 Kbs throughput of each logical channel up to the total capacity of the D Channel.

7.3.1.22.9 The PRI D Channel shall allow for call associated signaling.

7.3.1.22.10 Interface Requirements - ISDN

7.3.1.22.11 BellSouth shall provide the BRI U interface using 2 wire copper loops in accordance with TR-NWT-000393, January 1991, *Generic Requirements for ISDN Basic Access Digital Subscriber Lines.*

7.3.1.22.12 BellSouth shall provide the BRI interface using Digital Subscriber Loops adhering to Bellcore TR-NWT-303 specifications to interconnect Digital Loop Carriers.

7.3.1.22.13 BellSouth shall offer PSD interfaces adhering to the X.25, S.75 and S.75' ANSI and Bellcore requirements.

7.3.1.22.14 BellSouth shall offer PSD trunk interfaces operating at 56Kbs.

8. **Operator Systems**

8.1 **Definition**

8.2 Operator Systems is the Network Element that provides operator and automated call handling and billing, special services, customer telephone listings and optional call completion services. The Operator Systems, Network Element provides two types of functions: Operator Service functions and Directory Assistance Service functions, each of which are described in detail below.

8.3 **Operator Service**

8.3.1 **Definition**

Operator Service provides: (1) operator handling for call completion (for example, collect, third number billing, and manual credit card calls), (2) operator or automated assistance for billing after the customer has dialed the called number (for example, credit card calls); and (3) special services including but not limited to Busy Line Verification and Emergency Line Interrupt (ELI), Emergency Agency Call, Operator-assisted Directory Assistance, and Rate Quotes.

8.3.2 **Requirements**

8.3.2.1 When AT&T requests BellSouth to provide Operator Services, the following requirements apply:

8.3.2.1.1 BellSouth shall complete 0+ and 0- dialed local calls.

8.3.2.1.2 BellSouth shall complete 0+ intraLATA toll calls.

8.3.2.1.3 BellSouth shall complete calls that are billed to an AT&T customer's calling card that can be validated by BellSouth.

8.3.2.1.4 BellSouth shall complete person-to-person calls.

8.3.2.1.5 BellSouth shall complete collect calls.

8.3.2.1.6 BellSouth shall provide the capability for callers to bill to a third party and complete such calls.

8.3.2.1.7 BellSouth shall complete station-to-station calls.

8.3.2.1.8 BellSouth shall process emergency calls.

8.3.2.1.9 BellSouth shall process Busy Line Verify and Emergency Line Interrupt requests.

8.3.2.1.10 BellSouth shall process emergency call trace, as they do for their Customers prior to the Effective Date. Call must originate from a 911 provider.

8.3.2.1.11 BellSouth shall process operator-assisted directory assistance calls.

8.3.2.1.12 **DELETED**

8.3.2.1.13 **DELETED**

8.3.2.1.14 BellSouth will provide the ability for an AT&T Customer to reach a "live" operator on a 0-call.

8.3.2.1.15 BellSouth shall brand Operator Service as specified by AT&T in Section 19 of the General Terms and Conditions of this Agreement.

8.3.2.2 **DELETED**

8.3.2.3 BellSouth shall adhere to equal access requirements, providing AT&T local customers the same IXC access as provided to BellSouth customers.

8.3.2.4 BellSouth shall exercise at least the same level of fraud control in providing Operator Service to AT&T that BellSouth provides for its own operator service.

8.3.2.5 BellSouth shall perform Billed Number Screening when handling Collect, Person-to-Person, and Billed-to-Third-Party calls.

8.3.2.6 **DELETED**

8.3.2.7 BellSouth shall direct customer account and other similar inquiries to the customer service center designated by AT&T.

8.3.2.8 BellSouth shall provide an electronic feed of customer call records in "EMR" format to AT&T in accordance with the time schedule designated by AT&T.

8.3.2.9 **DELETED**

8.3.3 **Interface Requirements:**

With respect to Operator Services for calls that originate on local switching capability provided by or on behalf of AT&T, the interface requirements shall conform to the then current established system interface specifications for the platform used to provide Operator Service and the interface shall conform to industry standards.

8.4 **Directory Assistance Service**

8.4.1 **Definition**

Directory Assistance Service provides local customer telephone number listings with the option to complete the call at the callers direction separate and distinct from local switching.

8.4.2 **Requirements**

8.4.2.1 Directory Assistance Service shall provide up to two listing requests per call. If available and if requested by AT&T's customer, BellSouth shall provide caller-optional directory assistance call completion service to one of the provided listings, equal to that which BellSouth provides its customers. If not available, AT&T may request such requirement pursuant to the Bona Fide Request Process provided for in Attachment 14 of this Agreement.

8.4.2.2 BellSouth shall brand Directory Assistance Service as specified by AT&T in Section 19 of the General Terms and Conditions of this Agreement.

8.4.2.3 **DELETED**

8.4.2.4 **DELETED**

8.4.2.5 **Directory Assistance Service Updates**

8.4.2.5.1 BellSouth shall update customer listings changes daily. These changes include:

8.4.2.5.1.1 New customer connections: BellSouth will provide service to AT&T that is equal to the service it provides to itself and its customers;

8.4.2.5.1.2 Customer disconnections: BellSouth will provide service to AT&T that is equal to the service it provides to itself and its customers; and

8.4.2.5.1.3 Customer address changes: BellSouth will provide service to AT&T that is equal to the service it provides to itself and its customers;

8.4.2.6 These updates shall also be provided for non-listed and non-published numbers for use in emergencies.

9. **Common Transport**

9.1 **Definition**

Common Transport is an interoffice transmission path between BellSouth Network Elements (illustrated in Figure 2). Where BellSouth Network Elements are connected by intra-office wiring, such wiring is provided as a part of the Network Elements and is not Common Transport. Common Transport consists of BellSouth inter-office transport facilities and is unbundled from local switching.

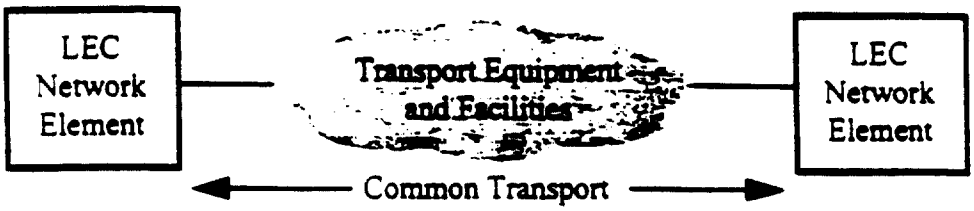

Figure 2

9.2 **Technical Requirements**

9.2.1 Common Transport provided on DS1 or VT1.5 circuits, shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Central Office to Central Office "CO to CO" connections in the technical reference set forth in Section 9.2.4.31 of this Attachment 2.

9.2.2 Common Transport provided on DS3 circuits, STS-1 circuits, and higher transmission bit rate circuits, Common Transport shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Central Office to Central Office "CO to CO" connections in the technical reference set forth in Section 9.2.4.30 of this Attachment 2.

9.2.3 BellSouth shall be responsible for the engineering, provisioning, and maintenance of the underlying equipment and facilities that are used to provide Common Transport.

9.2.4 At a minimum, Common Transport shall meet all of the requirements set forth in the following technical references (as applicable for the transport technology being used):

9.2.4.1 ANSI T1.101-1994, American National Standard for Telecommunications - Synchronization Interface Standard Performance and Availability;

9.2.4.2 ANSI T1.102-1993, American National Standard for Telecommunications - Digital Hierarchy - Electrical Interfaces;

9.2.4.3 ANSI T1.102.01-199x, American National Standard for Telecommunications - Digital Hierarchy - VT1.5;

9.2.4.4 ANSI T1.105-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Basic Description including Multiplex Structure, Rates and Formats;

9.2.4.5 ANSI T1.105.01-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Automatic Protection Switching;

9.2.4.6 ANSI T1.105.02-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Payload Mappings;

9.2.4.7 ANSI T1.105.03-1994, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Jitter at Network Interfaces;

9.2.4.8 ANSI T1.105.03a-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET): Jitter at Network Interfaces - DS1 Supplement;

9.2.4.9 ANSI T1.105.05-1994, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Tandem Connection;

9.2.4.10 ANSI T1.105.06-199x, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Physical Layer Specifications;

9.2.4.11 ANSI T1.105.07-199x, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Sub STS-1 Interface Rates and Formats;

9.2.4.12 ANSI T1.105.09-199x, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Network Element Timing and Synchronization;

9.2.4.13 ANSI T1.106-1988, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (Single Mode);

9.2.4.14 ANSI T1.107-1988, American National Standard for Telecommunications - Digital Hierarchy - Formats Specifications;

9.2.4.15 ANSI T1.107a-1990 - American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications (DS3 Format Applications);

9.2.4.16 ANSI T1.107b-1991 - American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications;

9.2.4.17 ANSI T1.117-1991, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (SONET) (Single Mode - Short Reach);

9.2.4.18 ANSI T1.403-1989, Carrier to Customer Installation, DS1 Metallic Interface Specification;

9.2.4.19 ANSI T1.404-1994, Network-to-Customer Installation - DS3 Metallic Interface Specification;

9.2.4.20 ITU Recommendation G.707, Network node interface for the synchronous digital hierarchy (SDH);

9.2.4.21 ITU Recommendation G.704, Synchronous frame structures used at 1544, 6312, 2048, 8488 and 44736 kbit/s hierarchical levels;

9.2.4.22 Bellcore FR-440 and TR-NWT-000499, Transport Systems Generic Requirements (TSGR): Common Requirements;

9.2.4.23 Bellcore GR-820-CORE, Generic Transmission Surveillance: DS1 & DS3 Performance;

9.2.4.24 Bellcore GR-253-CORE, Synchronous Optical Network Systems (SONET); Common Generic Criteria;

9.2.4.25 Bellcore TR-NWT 000507, Transmission, Section 7, Issue 5 (Bellcore, December 1993). (A module of LSSGR, FR-NWT-000064.);

9.2.4.26 Bellcore TR-NWT-000776, Network Interface Description for ISDN Customer Access;

9.2.4.27 Bellcore TR-INS-000342, High-Capacity Digital Special Access Service-Transmission Parameter Limits and Interface Combinations, Issue 1 February 1991;

9.2.4.28 Bellcore ST-TEC 000052, Telecommunications Transmission Engineering Textbook, Volume 2: Facilities, Third Edition, Issue I May 1989;

9.2.4.29 Bellcore ST-TEC-000051, Telecommunications Transmission Engineering Textbook Volume 1: Principles, Third Edition. Issue 1 August 1987;

9.2.4.30 AT&T Technical Reference 54014, ACCUNET T45 Service Description and Interface Specification, May 1992; and

9.2.4.31 AT&T Technical Reference TR 62411 ACCUNET T1.5 Service Description And Interface Specification, December 1990 and all addenda.

10. **Dedicated Transport**

10.1 **Definition**

10.1.1.1 Dedicated Transport is an interoffice transmission path between AT&T designated locations unbundled from local switching. AT&T designated locations may include BellSouth central offices or other equipment locations, AT&T network components, other carrier network components, or customer premises. Dedicated Transport is depicted below in Figure 3.

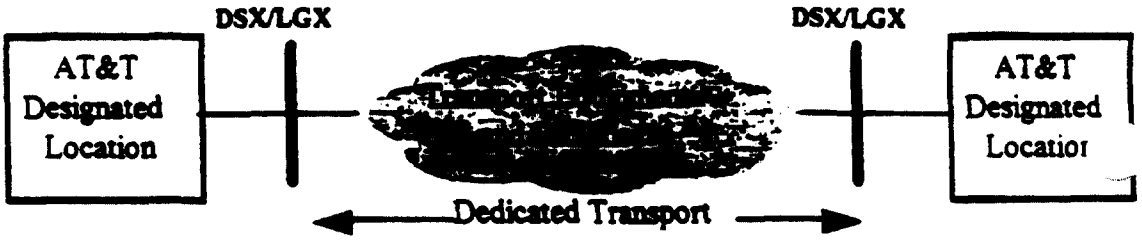

Figure 3

10.1.2 BellSouth shall offer Dedicated Transport in each of the following ways:

10.1.2.1 As capacity on a shared circuit.

10.1.2.2 As a circuit (e.g., DS1, DS3, STS-1) dedicated to AT&T.

10.1.2.3 As a system (i.e., the equipment and facilities used to provide Dedicated Transport such as SONET ring) dedicated to AT&T.

10.1.3 When Dedicated Transport is provided as a circuit or as capacity on a shared circuit, it shall include (as appropriate):

10.1.3.1 Multiplexing functionality;

10.1.3.2 Grooming functionality; and

10.1.3.3 Redundant equipment and facilities necessary to support protection and restoration.

10.1.4 When Dedicated Transport is provided as a system it shall include:

10.1.4.1 Transmission equipment such as multiplexers, line terminating equipment, amplifiers, and regenerators;

10.1.4.2 Inter-office transmission facilities such as optical fiber, copper twisted pair, and coaxial cable;

10.1.4.3 Redundant equipment and facilities necessary to support protection and restoration; and

10.1.4.4 Dedicated Transport includes the Digital Cross-Connect System (DCS) functionality as an option. DCS is described below in Section 10.5 of this Attachment.

10.2 **Technical Requirements**

This Section sets forth technical requirements for all Dedicated Transport.

10.2.1 When BellSouth provides Dedicated Transport as a circuit or a system, the entire designated transmission circuit or system (*e.g.*, DS1, DS3, STS-1) shall be dedicated to AT&T designated traffic.

10.2.2 BellSouth shall offer Dedicated Transport in all technologies that become available during the life of the contract including, but not limited to, DS1 and DS3 transport systems, SONET (or SDH) Bi-directional Line Switched Rings, SONET (or SDH) Unidirectional Path Switched Rings, and SONET (or SDH) point-to-point transport systems (including linear add-drop systems), at all available transmission bit rates.

10.2.3 For DS1 or VT1.5 circuits, Dedicated Transport shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Customer Interface to Central Office "CI to CO" connections in the technical references set forth in Section 10.4 of this Attachment.

10.2.4 For DS3 circuits, STS-1 circuits, and higher rate circuits, Dedicated Transport shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Customer Interface to Central Office "CI to CO" connections in the technical references set forth in Section 10.4 of this Attachment.

10.2.5 When requested by AT&T, Dedicated Transport shall provide physical diversity. Physical diversity means that two circuits are provisioned in such a way that no single failure of facilities or equipment will cause a failure on both circuits.

10.2.6 When physical diversity is requested by AT&T, BellSouth shall provide the maximum feasible physical separation between intra-office and inter-office transmission paths (unless otherwise agreed by AT&T).

10.2.7 Upon AT&T's request, BellSouth shall provide real time and continuous remote access to performance monitoring and alarm data affecting, or potentially affecting, AT&T's traffic.

10.2.8 BellSouth shall offer the following interface transmission rates for Dedicated Transport:

10.2.8.1 DS1 (Extended SuperFrame - ESF, D4, and unframed applications shall be provided);

10.2.8.2 DS3 (C-bit Parity, M13, and unframed applications shall be provided);

10.2.8.3 SONET standard interface rates in accordance with ANSI T1.105 and ANSI T1.105.07 and physical interfaces per ANSI T1.106.06 (including referenced interfaces). In particular, VT1.5 based STS-1s will be the interface at an AT&T service node.

10.2.8.4 SDH Standard interface rates in accordance with International Telecommunications Union (ITU) Recommendation G.707 and Plesiochronous Digital Hierarchy (PDH) rates per ITU Recommendation G.704.

10.2.9 BellSouth shall provide cross-office wiring up to a suitable Point of Termination (POT) between Dedicated Transport and AT&T designated equipment. BellSouth shall provide the following equipment for the physical POT:

10.2.9.1 DSX1 for DS1s or VT1.5s;

10.2.9.2 DSX3 for DS3s or STS-1s; and

10.2.9.3 LGX for optical signals (e.g., OC-3 and OC-12)

10.2.10 **DELETED**

10.2.11 When Dedicated Transport is provided as a system, BellSouth shall design the system according to AT&T's architectural requirements. This includes, but is not limited to:

1. Facility routing and termination points (including diversity requirements),

2. Interface selection among those available on the system,

3. System provisionable parameters (e.g. protection switching thresholds). This does not include specification of the vendor to be used by BellSouth, except where mutually agreed.

10.2.12 Upon AT&T's request, BellSouth shall provide AT&T with electronic provisioning control of AT&T rings. As system development allows, BellSouth shall provide this functionality in other transport systems (e.g. linear transport systems.)

10.2.13 BellSouth shall offer Dedicated Transport together with and separately from DCS.

10.3 Technical Requirements for Dedicated Transport Using SONET technology.

This Section sets forth additional technical requirements for Dedicated Transport using SONET technology including rings, point-to-point systems, and linear add-drop systems.

10.3.1 All SONET Dedicated Transport provided as a system shall:

10.3.1.1 Be synchronized from both a primary and secondary Stratum 1 level timing source. Additional detail on synchronization requirements are given in Section 16.4 of this Attachment 2.

10.3.1.2 Provide SONET standard interfaces which properly interwork with SONET standard equipment from other vendors. This includes, but is not limited to, SONET standard Section, Line, and Path performance monitoring, maintenance signals, alarms, and data channels.

10.3.1.3 Provide Data Communications Channel (DCC) or equivalent connectivity through the SONET transport system. Dedicated Transport provided over a SONET transport system shall be capable of routing DCC messages between AT&T SONET network components connected to the Dedicated Transport. For example, if AT&T leases a SONET ring from BellSouth, that ring shall support DCC message routing between AT&T SONET network components connected to the ring.

10.3.1.4 Support the following performance requirements for each circuit (STS-1, DS1, DS3, etc.):

10.3.1.5 No more than 10 Errored Seconds Per Day (Errored Seconds are defined in the technical reference at Section 10.4.5 of this Attachment); and

10.3.1.6 No more than 1 Severely Errored Second Per Day (Severely Errored Seconds are defined in the technical reference at Section 10.4.5 of this Attachment).

10.3.1.7 All SONET rings shall:

10.3.1.8 Be provisioned on physically diverse fiber optic cables (including separate building entrances where available and diversely routed intra-office wiring). "Diversely routed" shall be interpreted as the maximum feasible physical separation between transmission paths, unless otherwise agreed by AT&T.

10.3.1.9 Support dual ring interworking per SONET Standards.

10.3.1.10 To the extent technically feasible, BellSouth shall provide the necessary redundancy in optics, electronics, and transmission paths (including intra-office wiring) such that no single failure will cause a service interruption.

10.3.1.11 Provide the ability to disable ring protection switching at AT&T's direction (selective protection lock-out), if BellSouth's SONET equipment provides this functionality. This requirement applies to line switched rings only.

10.3.1.12 Provide the ability to use the protection channels to carry traffic (extra traffic), if BellSouth's SONET equipment provides this functionality. This requirement applies to line switched rings only.

10.3.1.13 Provide 50 millisecond restoration unless a ring protection delay is set to accommodate dual ring interworking schemes.

10.3.1.14 Have settable ring protection switching thresholds that shall be set in accordance with AT&T's specifications.

10.3.1.15 Provide revertive protection switching with a settable wait to restore delay with a default setting of 5 minutes. This requirement applies to line switched rings only.

10.3.1.16 Provide non-revertive protection switching. This requirement applies to path switched rings only.

10.3.1.17 Adhere to the following availability requirements, where availability is defined in the technical reference set forth in Section 10.4.5 of this Attachment.

10.3.1.17.1 For any circuit through the ring, no more than 3.5 minutes of unavailability per month.

10.3.1.17.2 For any circuit through the ring, no more than 10 minutes of unavailability per year.

10.4 At a minimum, Dedicated Transport shall meet each of the requirements set forth in Section 9.2.4 of this Attachment and in the following technical references:

10.4.1 ANSI T1.105.04-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Data Communication Channel Protocols and Architectures;

10.4.2 ANSI T1.119-1994, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Operations, Administration, Maintenance, and Provisioning (OAM&P) Communications;

10.4.3 ANSI T1.119.01-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Operations, Administration, Maintenance, and Provisioning (OAM&P) Communications Protection Switching Fragment;

10.4.4 ANSI T1.119.02-199x, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Operations, Administration, Maintenance, and Provisioning (OAM&P) Communications Performance Monitoring Fragment;

10.4.5 ANSI T1.231-1993 -American National Standard for Telecommunications - Digital Hierarchy - Layer 1 In-Service Digital Transmission performance monitoring.

10.4.6 AT&T Technical Reference TR 54016, Requirements For Interfacing Digital Terminal Equipment To Services Employing The Extended Superframe Format, September 1989, where the underlying equipment used by BellSouth to provide unbundled dedicated transport supports this functionality;

10.4.7 **DELETED**

10.4.8 AT&T Technical Reference TR 62310, DS0 Digital Local Channel Description And Interface Specification, August 1993 and all addenda, where the underlying equipment used by BellSouth to provide unbundled dedicated transport supports this functionality;

10.4.9 AT&T Technical Reference TR 62415, Access Specification For High Capacity (DS1/DS3) Dedicated Digital Service, June 1989 and all addenda;

10.4.9.1 ANSI T1.101-1994, American National Standard for Telecommunications - Synchronization Interface Standard Performance and Availability;

10.4.9.2 ANSI T1.102-1993, American National Standard for Telecommunications - Digital Hierarchy - Electrical Interfaces;

10.4.9.3 ANSI T1.102.01-199x, American National Standard for Telecommunications - Digital Hierarchy - VT1.5;

10.4.9.4 ANSI T1.105-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Basic Description including Multiplex Structure, Rates and Formats;

10.4.9.5 ANSI T1.105.01-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Automatic Protection Switching;

10.4.9.6 ANSI T1.105.02-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Payload Mappings;

10.4.9.7 ANSI T1.105.03-1994, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Jitter at Network Interfaces;

10.4.9.8 ANSI T1.105.03a-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET): Jitter at Network Interfaces - DS1 Supplement;

10.4.9.9 ANSI T1.105.05-1994, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Tandem Connection;

10.4.9.10 ANSI T1.105.06-199x, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Physical Layer Specifications;

10.4.9.11 ANSI T1.105.07-199x, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Sub STS-1 Interface Rates and Formats;

10.4.9.12 ANSI T1.105.09-199x, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Network Element Timing and Synchronization;

10.4.9.13 ANSI T1.106-1988, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (Single Mode);

10.4.9.14 ANSI T1.107-1988, American National Standard for Telecommunications - Digital Hierarchy - Formats Specifications;

10.4.9.15 ANSI T1.107a-1990 - American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications (DS3 Format Applications);

10.4.9.16 ANSI T1.107b-1991 - American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications;

10.4.9.17 ANSI T1.117-1991, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (SONET) (Single Mode - Short Reach);

10.4.9.18 ANSI T1.403-1989, Carrier to Customer Installation, DS1 Metallic Interface Specification;

10.4.9.19 ANSI T1.404-1994, Network-to-Customer Installation - DS3 Metallic Interface Specification;

10.4.9.20 ITU Recommendation G.707, Network node interface for the synchronous digital hierarchy (SDH);

10.4.9.21 ITU Recommendation G.704, Synchronous frame structures used at 1544, 6312, 2048, 8488 and 44736 kbit/s hierarchical levels;

10.4.9.22 Bellcore FR-440 and TR-NWT-000499, Transport Systems Generic Requirements (TSGR): Common Requirements;

10.4.9.23 Bellcore GR-820-CORE, Generic Transmission Surveillance: DS1 & DS3 Performance;

10.4.9.24 Bellcore GR-253-CORE, Synchronous Optical Network Systems (SONET); Common Generic Criteria;

10.4.9.25 Bellcore TR-NWT 000507, Transmission, Section 7, Issue 5 (Bellcore, December 1993). (A module of LSSGR, FR-NWT-000064.);

10.4.9.26 Bellcore TR-NWT-000776, Network Interface Description for ISDN Customer Access;

10.4.9.27 Bellcore TR-INS-000342, High-Capacity Digital Special Access Service-Transmission Parameter Limits and Interface Combinations, Issue 1 February 1991;

10.4.9.28 Bellcore ST-TEC 000052, Telecommunications Transmission Engineering Textbook, Volume 2: Facilities, Third Edition, Issue I May 1989;

10.4.9.29 Bellcore ST-TEC-000051, Telecommunications Transmission Engineering Textbook Volume 1: Principles, Third Edition. Issue 1 August 1987;

10.4.9.30 AT&T Technical Reference 54014, ACCUNET T45 Service Description and Interface Specification, May 1992; and

10.4.9.31 AT&T Technical Reference TR 62411 ACCUNET T1.5 Service Description And Interface Specification, December 1990 and all addenda.

10.5 **Digital Cross-Connect System (DCS)**

10.5.1 **Definition**

10.5.1.1 DCS provides automated cross connection of Digital Signal level 0 (DS0) or higher transmission bit rate digital channels within physical interface facilities. Types of DCSs include but are not limited to DCS 1/0s, DCS 3/1s, and DCS 3/3s, where the nomenclature 1/0 denotes interfaces typically at the DS1 rate or greater with cross-connection typically at the DS0 rate. This same nomenclature, at the appropriate rate substitution, extends to the other types of DCSs specifically cited as 3/1 and 3/3. Types of DCSs that cross-connect Synchronous Transport Signal level 1 (STS-1s) or other Synchronous Optical Network (SONET) signals (*e.g.*, STS-3) are also DCSs, although not denoted by this same type of nomenclature. DCS may provide the functionality of more than one of the aforementioned DCS types (e.g., DCS 3/3/1 which combines functionality of DCS 3/3 and DCS 3/1). For such DCSs, the requirements will be, at least, the aggregation of requirements on the "component" DCSs.

10.5.1.2 In locations where automated cross connection capability does not exist, DCS will be defined as the combination of the functionality provided by a Digital Signal Cross-Connect (DSX) or Light Guide Cross-Connect (LGX) patch panels and D4 channel banks or other DS0 and above multiplexing equipment used to provide the function of a manual cross connection.

10.5.1.3 Interconnection between a DSX or LGX, to a switch, another cross-connect, or other service platform device, is included as part of DCS.

10.6 **DCS Technical Requirements**